88425

S/056/60/039/006/010/063
B006/B056

24.6520

AUTHOR: Romanov, A. M.

TITLE: Excitation of the Levels of the Si^{30}-Nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
                 Vol. 39, No. 6(12), pp. 1540-1541

TEXT: The author checked the Si^{30}-level energies measured by other authors
by investigating the proton energy spectrum of the reaction $Al^{27}(\alpha,p)Si^{30}$
at α-energies of 10.4, 13.65, and 14.7 Mev. The alpha particle beam coming
from the cyclotron was focused by means of quadrupole lenses, collimated,
and directed onto a 0.13 mg/cm² thick aluminum target at an angle of 45°.
The target was located in a brass chamber, within which nuclear photo-
graphic plates of the type Я-2 (Ya-2) were arranged round the target
at a distance of 206 mm. The plates were in boxes, whose windows, which
were closed by means of aluminum foils, faced the target. After exposure,
the plates were subjected to the usual treatment; the length of the proton

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Excitation of the Levels of the Si^{30}-Nucleus   S/056/60/039/006/010/063
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tracks was measured by means of a М Б И-2 (MBI-2) microscope. For deter-
mining the level energies, the formula

$$Q_i = E_{pi}(1+m_p/m_r) - E_\alpha(1-m_\alpha/m_r) - 2\cos\Theta \sqrt{E_{pi}E_\alpha m_p m_\alpha}/m_r$$ was used, where

Q_i denotes the energy of the reaction with excitation of the i-th level
of the final nucleus, m_p, m_α, and m_r denote the mass of proton, α-particle,
and residual nucleus, respectively. E_α is the energy of the α-particles in
the laboratory system, E_{pi} - the mean energy of the proton group produced
in reactions under formation of a final nucleus in the i-th state, Θ - the
angle of departure of protons in the laboratory system (60 or $90°$);
Q_o = 2.38 Mev. The results obtained are given in a table and compared
with those obtained by other authors. The author thanks L. N. Goryachey
for his collaboration; B. P. Dzhelepov and L. L. Peker are mentioned.
There are 1 table and 7 references: 1 Soviet, 1 British, and 5 US.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk
               SSSR (Leningrad Institute of Physics and Technology of the
               Academy of Sciences USSR)

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88425

Excitation of the Levels of the Si^{30}-Nucleus   S/056/60/039/006/010/063
                                                    B006/B056

SUBMITTED: June 30, 1960

Text to the Table: 1) Level number of the Si^{30}-nucleus. 2) Level energies according to data of Ref. 5. 3) dto. according to data of Ref. 6. 4) according to data of Ref. 7. 5) Values measured by the author. All energies are given in Mev.

Номер уровня 1	Энергия уровня, MeV			
	по данным [²] 2	по данным [³] 3	по дан-ным [⁷] 4	5 наши данные
1	2,258±0,006	2,23±0,02	—	2,26±0,05
2	3,518±0,007	3,52±0,02	3,65	3,50±0,06
3	3,798±0,009	3,80±0,04	—	3,82±0,06
4	4,85±0,01	4,83±0,02	—	4,80±0,06
5	—	5,28±0,02	—	5,30±0,08
6	—	5,52±0,03	5,60	5,48±0,08
7	—	5,94±0,04	—	5,70±0,08
8	—	—	—	6,08±0,07
9	—	6,52±0,03	—	6,68±0,07
10	—	7,10±0,03	—	7,06±0,07
11	—	7,38±0,05	7,34	7,40±0,08
12	—	—	—	7,76±0,09
13	—	—	8,36	8,44±0,09
14	—	—	—	8,80±0,10
15	—	—	9,42	9,38±0,10
16	—	—	—	9,70±0,10(?)
17	—	—	10,03	9,96±0,10
18	—	—	—	10,60±0,10
19	—	—	11,02	11,06±0,10

Card 3/3

TSAREVA, T.V.; ROMANOV, A.M.; MYAKININ, Ye.V.; KONSTANTINOVA, M.P.

$C^{12}(\alpha,p)N^{15}$ reaction of 13,6 Mev. alpha particles. Izv. AN Uz. SSR.
Fiz.-mat. nauk no.1:84-85 '61.   (MIRA 14:3)

1. Fiziko-tekhnicheskiy institut AN SSSR.
                (Alpha rays)   (Nuclear reactions)

33115
S/638/61/001/000/042/056
B108/B138

AUTHORS: Konstantinova, M. P., Myakinin, Ye. V., Romanov, A. M.,
Tsareva, T. V.

TITLE: Angular distribution of protons from $C^{12}(\alpha,p)N^{15}$ with
14.5-Mev alphas

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy
energii. Tashkent, 1959. Trudy. v. 1. Tashkent, 1961,
262-267

TEXT: A study of the angular distribution of protons from (α,p) reactions
may give insight into the direct interaction between alphas and nucleons.
The authors studied the $C^{12}(\alpha,p)N^{15}$ reaction with alpha particles of an
energy of 14.5 Mev, obtained from the cyclotron at the Physicotechnical
Institute (see Association entry). The target consisted of a gold foil
(0.25 mg/cm^2) covered with a thin layer of carbon black. The differential
cross section of the above reaction with N^{15} in the ground state was
determined from the histograms of the proton tracks (Fig. 3). The overall
error was about 10%. Experiments with a carbon target without gold

Card 1/3

33115
S/638/61/0C1/000/042/056
Angular distribution of protons...   B108/B138

backing showed that in the range 20-40° (lab system) the cross section
increases rather more with decreasing angle than was expected by theory.
The results indicate that the principal direct interaction process in the
case considered is the "knocking-out" of protons from the nucleus by
alphas. Best agreement of experimental and theoretical data was reached
when the interaction radius was assumed to be equal to $4.8 \cdot 10^{-13}$ cm. The
somewhat high theoretical values of the cross section in the range
60-130° (c.m.s.) are due to the assumption that the incident and
departing particles do not interact with the nucleus. The increase in the
reaction cross section in the range 140-170° may be regarded as confirma-
tion of the stripping of heavy particles. The anisotropic character of
the angular distribution is also conserved when the energy of the alpha
particles decreases. This speaks in favor of direct interactions playing
the main part in the $C^{12}(\alpha,p)N^{15}$ reaction at the energy under considera-
tion. There are 3 figures and 11 non-Soviet references. The four most
recent references to English-language publications read as follows:
Butler S. T. Phys. Rev., 106, 272, 1957; Pieper G. F., Heydenburg N. P.
Phys. Rev., 111, 264, 1958; Kerlee D. D. et al. Phys. Rev., 107, 1343,
1957; Igo G., Thaler R. M. Phys. Rev., 106, 126, 1957.
Card 2/3

33115
S/638/61/001/000/042/056
Angular distribution of protons ...   B108/B138

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Physicotechnical
               Institute AS USSR)

Fig. 3. Angular distribution of protons from $C^{12}(\alpha,p)N^{15}$ at alpha energy
14.5 Mev. Legend: abscissa - differential reaction cross sections.
(1) Calculated, (2) experimental.
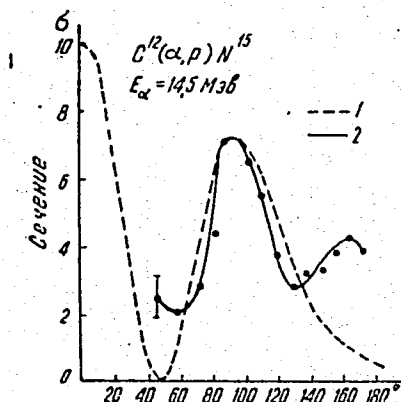
Card 3/3

ROMANOV, A.M.; MYAKININ, Ye.V.; KONSTANTINOVA, M.P.

Ne^{22} levels excited in the reaction F^{19} (α, p)Ne^{22}.
Izv. AN SSSR. Ser. fiz. 25 no.9:1135-1137 '61.
(MIRA 14:8)

1. Fiziko-tekhnicheskiy institut AN SSSR.
(Neon--Isotopes)
(Nuclear reactions)

KONSTANTINOVA, M.P.; MYAKININ, Ye.V.; ROMANOV, A.M.; TSAREVA, T.V.

Elastic scattering of 10 - 15 mev. α-particles on gold and aluminum.
Zhur.eksp.i teor.fiz. 41 no.1:49-51 Jl '61.   (MIRA 14:7)

1. Leningradskiy fiziko-tekhnicheskiy institut AN SSSR.
   (Alpha rays—Scattering)   (Cyclotron)

ROMANOV, A.M.; MYAKININ, Ye.V.; KONSTANTINOVA, M.P.

Excited levels of Ne^{22}. Zhur.eksp.i teor.fiz. 41 no.1:64-65 Jl
'61.   (MIRA 14:7)

1. Leningradskiy fiziko-tekhnicheskiy institut AN SSSR.
    (Neon—Isotopes)   (Nuclear reactions)   (Protons—Spectra)

KOMANOV, A.M.

<div style="text-align:center">PHASE I BOOK EXPLOITATION</div>

SOV/6309

Starodubtsev, S. V., and A. M. Romanov.

Prokhozhdeniye zaryazhennykh chastits cherez veshchestvo (Penetration of
Charged Particles Through Matter) Tashkent, Izd-vo AN UzSSR, 1962.
226 p. 2500 copies printed. Added t. p. in Uzbek.

Sponsoring Agency: Akademiya nauk Uzbekskoy SSR. Fiziko-tekhnicheskiy
institut.

Ed.: I. G. Gaysinskaya; Tech. Ed.: Kh. U. Karabayeva.

PURPOSE: The book is intended for staff members of research institutes,
teachers at higher educational institutions, and students of advanced
courses in physics departments.

Card 1/4

Penetration of Charged (Cont.)   SOV/6309

COVERAGE: Theoretical fundamentals of the interaction of charged particles
with matter are presented, and the results of experimental investigations
on the penetration of charged particles and electrons through matter are
examined. The basic emphasis is on problems concerning the loss of
energy and the ionization produced by charged particles. No personalities
are mentioned. There are 520 references, most of them to books and
journals in English.

TABLE OF CONTENTS:

Card 2/4

S/903/62/000/000/005/044
B102/B234

AUTHORS: Tsareva, T. V., Romanov, A. M., Myakinin, Ye. V.,
             Konstantinova, M. P.

TITLE: The (α,p)-reaction on carbon and the anomalies arising at
             α-particle energies of 10 - 15 Mev

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy
             Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by
             A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 123-132

TEXT: The reaction $C^{12}(\alpha,p)N^{15}$ was investigated with the aim of determining
the role of the various possible mechanisms of direct interaction and the
reaction $Al^{27}(\alpha,p)Si^{30}$ in order to obtain data on the high energy levels of
Si^{30} and on the role of the direct mechanisms in Si^{30} formation in the ground
and first excited states. The experiments were made with the α-beam of the
cyclotron of the FTI AN SSSR with 100-μ $\text{\AA}$-2 (Ya-2) emulsion plates and
targets enclosed in a spherical brass chamber (500 mm diam). The angular
distribution measurements were made in the intervals 10-50, 50-90, 80-140
and 130-170° (lab system). The proton angular distributions for the $C^{12}(\alpha,p)$
Card 1/3

The (α,p)-reaction on...

S/903/62/000/000/005/044
B102/B234

reaction were made with soot targets on 0.25 mg/cm^2 gold foils and a 120μ Al filter which served for eliminating the elasticity scattered alphas and the proton groups corresponding to formation of N^{15} nuclei in excited states. The experimental results are compared with theoretical considerations based on the formula for $d\sigma/d\Omega$ derived by Austern et al. (Phys. Rev., 92, 350, 1953), the wave vector of the recoil nucleus is determined from the masses and the wave vectors of the particles involved. The theoretical curve describes qualitatively the angular distribution measured. The Si^{30} levels excited in (α,p) reactions are determined and compared with published data (Proc. Phys. Soc., 73, 793, 1959; Bull. Amer. Phys. Soc., 1, 280, 1956; Phys. Rev., 76, 624, 1949). The results are given in the table. Also the angular distribution of the protons from the reaction $Al^{27}(\alpha,p)Si^{30}$ was determined; the Al target foils were 0.5 mg/cm^2 thick and were exposed to long-time bombardment. The reaction cross section in the interval 40-120° was almost independent of the angle and lay between 15 and 20 μb/steradian (E_α = 14.7 Mev). The shape of the angular distribution in the interval 50 - 140° was only weakly dependent on E_α. The distribution

Card 2/3

The (α,p)-reaction on...

$d\sigma/d\Omega = f(\Theta_{c.m.s.})$ has three maxima which are
more distinctly marked in the case of
$E_\alpha = 14.7$ Mev than with $E_\alpha = 10.4$ Mev. They
are at about 20, 80 and 160°. There are
6 figures and 1 table.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy
              institut AN SSSR (Leningrad
              Physicotechnical Institute AS USSR)

S/903/62/000/000/005/044
B102/B234

no.	E, Mev
1	2,26±0,05
2	3,50±0,06
3	3,82±0,06
4	4,80±0,06
5	5,30±0,06
6	5,48±0,06
7	5,70±0,06
8	6,08±0,07
9	6,68±0,07
10	7,06±0,07
11	7,40±0,08
12	7,76±0,08
13	8,44±0,09
14	8,80±0,10
15	9,38±0,10
16	9,70±0,10 (?)
17	9,06±0,10
18	10,60±0,10
19	11,06±0,10

Card 3/3

33794
S/108/62/017/002/009/010
D201/D305

6,9411 (1159)

AUTHORS: Davydov, V.S., and Romanov, A.M., Members of the So-
ciety (see Association)

TITLE: Passage of pulse signals and of noise through a sta-
ggered tuned two-stage amplifier

PERIODICAL: Radiotekhnika, v. 17, no. 2, 1962, 64 - 70

TEXT: The authors consider the effect of staggered tuning, expres-
sed as the ratio $m = f_{02}/f_{01}$, of two stages of equal Q's in the
passage through the amplifier of step- and linearly increasing vol-
tages; they consider also the effect of noise having a constant $1/f$
varying spectral density. The analysis makes it possible to evalua-
te the S/N ratio as a function of m and Q. The output voltage re-
sulting from the step- and linearly varying input voltages is de-
termined by assuming: $U_1(t) = 1(t)$ and $U_1(t) = at(1(t))$, taking
their Laplace transforms, multiplying the transforms by the trans-
form of the transfer function of the amplifier and by drawing the

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33794

S/108/62/017/002/009/010
D201/D305

Passage of pulse signals and of ...

graphs of the output voltage in both cases as a function of $Q \leqslant 0.5$. The graphs show that with a decreased staggering the time during which the output signal reaches its maximum (t_1) and then becomes zero (t_2) increases. The duration of t_1 and t_2 of the amplifier response to a step-input is less than that for a linearly increasing input voltage. The passage of white and frequency-dependent noise through the amplifier is analyzed by taking the r.m.s. value of noise in an infinitely narrow band df, from which the r.m.s. value of this noise at the output is evaluated as

$$\overline{U_{\overline{n}'}^2} = \int_0^\infty W(f)\,\kappa^2(f)\,df. \qquad (3)$$

where

$$\kappa(f) = |\kappa(if)|.$$

$$\kappa^2(f) = \frac{\kappa_0^2}{\left\{1 + \left[Q\left(\frac{f}{f_{01}} - \frac{f_{01}}{f}\right)\right]^2\right\}\left\{1 + \left[Q\left(\frac{f}{mf_{01}} - \frac{mf_{01}}{f}\right)\right]^2\right\}}.$$

in which $K_0^2 = K_{01} \cdot K_{02}$ (overall gain at resonance). The graphs of

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Passage of pulse signals and of ...

33794
S/108/62/017/002/009/010
D201/D305

(3) for m = 1, $\sqrt{2}$ and 2 are shown as a function of Q. By combining the results of the two parts of the analysis, the ratios of the instantaneous values of output voltage at its first maximum to the r.m.s. value of noise at the output is easily determined. The authors acknowledge helpful suggestions by G.V. Voyshvillo. There are 2 tables, 10 figures and 2 Soviet-bloc references.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications imeni A.S. Popov)[Abstractor's note: Name of Association taken from first page of journal]

SUBMITTED: March 28, 1961

Card 3/3

S/056/62/043/002/006/053
B102/B104

AUTHORS: Konstantinova, M. P., Myakinin, Ye. V., Petrov, A. M.,
             Romanov, A. M.

TITLE: Angular distributions of protons from (α,p)-reactions induced
             by alpha particles of 13-15 Mev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
             no. 2(8), 1962, 388 - 393

TEXT: To study the mechanism of (αp) direct interaction, the authors
determined the energy and angular distributions of protons from the
reactions $Li^6(\alpha,p)Be^9$, $Li^7(\alpha,p)Be^{10}$, $F^{19}(\alpha,p)Ne^{22}$, and $Al^{27}(\alpha,p)Si^{30}$ at
E_α = 13-15 Mev. The experimental arrangement was the same as that de-
scribed in ZhETF, 39, 1540, 1960. The charged particles were recorded by
Я-2 (Ya-2) nuclear emulsion plates. The plates were arranged so as to
comprise the angle intervals 10-50, 50-90, 80-140, and 130-170°. In the
c.m.s. all angular distribution curves σ(θ) show: (1) several maxima and

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Angular distributions of protons ...

S/056/62/043/002/006/053
B102,3104

minima; (2) asymmetry with respect to $\theta = 90°$; and (3) an increase of σ for large proton emission angles ($\theta > 120°$). These results agree with those of analogous reactions at E_α = 18-40 Mev. The characteristic features of the $\sigma(\theta)$ curves indicate the importance of direct interaction between nucleus and α-particles. The residual nuclei of the reactions $F^{19}(\alpha,p)Ne^{22}$ and $Al^{27}(\alpha,p)Si^{30}$ at E_α = 13-15 Mev are mainly in the excited state. The intensity of the p_0 proton group ($Li^6(\alpha,p)Be^9$; $Li^7(\alpha,p)Be^{10}$) is less than that of the p_1 and p_2 groups ($F^{19}(\alpha,p)Ne^{22}$; $Al^{27}(\alpha,p)Si^{30}$). The p_2 angular distribution of the F^{19} reaction does not contradict the assumption that the second excited level in Ne^{22} is a 2^+ level. There are 6 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences USSR)

SUBMITTED: February 23, 1961

Card 2/2

AUTHORS: Bel'skiy, S. A., Myakinin, Ye. V., Petrov, A. M.,
             Romanov, A. K., and Yur'yev, V. V.

TITLE: The energy transfer to the wall of the discharge chamber in
             the "Alpha" machine

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 2, 1963, 212 - 213

TEXT: The energy was measured with integral-type semiconductor and wire
bolometers connected to a measuring bridge. The vacuum in the hydrogen
plasma was $5 \cdot 10^{-5}$ - $2 \cdot 10^{-3}$ mm Hg. The energy measured by the detectors
rises monotonically with the voltage at the discharge capacitor battery.
This dependence is slightly less than in accordance with a square law.
Experiments with scintillation and boron counters and with a $CaSO_4$-Mn

thermo-luminophor showed that the energy transferred to the wall by short-
wave electromagnetic radiation is not more than 10% of the plasma energy.
A larger part of energy lost to the walls must be due to other processes
(neutral particles; ZhTF, 30, 12, 1419, 1960).

SUBMITTED: April 9, 1962
Card 1/1

RABINOV, A.E.

Practices in the introduction of dispatching. Vozh. i org.tekh. v
stroi. i proekt. no.2:36-39 '64.   (MIRA 18:10)

1. Trest No.9 Ministerstva stroitel'stva BSSR.

ROMANOV, A.N.

Life of the river beaver. Priroda 42 no.9:120-121 S '53.   (MLRA 6:8)

1. Komi filial Akademii nauk SSSR.   (Beavers)

Ros nov, A. M.

4505. Ros nov, A. M. Retsiona igatsiya protsessov kovki. (O,rt kuznetsov Leningr. Kirovskogo zavo s). L., 1954. 16 . s short. 1 sm. (use oyuz. o-v po respro: trananiyu polit I uch znaniy. Leningr. dom n uch.----tekhn. prop g ndy. Leningr. to-niye Us soyuz. Nauch. i .----T khn. O-va mashinostroit ley. Kom. kuznetsou shtampovshchi-kov. Listok novatora. No. 28(28). 3.800 ekz. 50K.----Dost. Ukazaly v kortse teksta. -----(54-1 076zh)
621.73

ROMANOV, A.N.

Blind trap for catching forest birds. Trudy OGZ no.4:437-440
'62.

(MIRA 17:9)

ROMANOV, A.N.

Automatic banding of wild animals and the outlook for its application
[with English summary in insert]. Zool.zhur.35 no.12:1902-1905 D '56.
(MLRA 10:1)

1. Komi filial Akademii nauk SSSR.
(Zoological research)

ROMANOV, A.N.

    First experiment in automatic banding of tetranoid birds. Zool.
zhur. 39 no.3:465-468 '60.   (MIRA 13:6)

    1. Komi Branch of the U.S.S.R. Academy of Sciences, Syktyvkar.
        (Birdbanding)

LOZINSKIY, M.G. (Moskva); ROMANOV, A.N. (Moskva)

Basic types of deformed microreliefs originating on the surface
of commercial-grade iron samples during fatigue tests with heating
in a vacuum. Mashinovedenie no.3:56-65 '65.

(MIRA 18:6)

LOZINSKIY, M.G., doktor tekhn. nauk; ROMANOV, A.N., inzh.

Present state of studying the nature of fatigue fracture of metals and alloys. Vest. mashinostr. 45 no.5:56-63 My '65.
(MIRA 18:6)

L 3378-66   EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)/
EWA(h)/EWA(c)   IJP(c)   JD

ACCESSION NR: AP5017207   UR/0020/65/162/006/1277/1280

AUTHORS: Lozinskiy, M. G.; Romanov, A. N.; Bochvar, A. A.

TITLE: Concerning the mechanism of extrusion and intrusion displace-
ment of microvolumes of alpha iron during fatigue tests under high
temperature heating

SOURCE: AN SSSR. Doklady, v. 162, no. 6, 1965, 1277-1280

TOPIC TAGS: iron, mechanical fatigue, high temperature fatigue,
fatigue test, crystal imperfection

ABSTRACT: The authors report some results of observations of the fine
structure of crystalline samples of technical iron, subjected to
fatigue tests by alternating bending in one plane, and simultaneously
to radiation heating in vacuum. The apparatus used for this purpose
(IMASh-10) was developed by the authors and described by them earlier
(Zav. lab. no. 2, 1965). The apparatus makes it possible to carry
out fatigue tests and microstructure analysis of samples heated to
1200° under different mechanical loading conditions. The tests were

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L 3378-66
ACCESSION NR: AP5017207

2

made on commercial iron of standard composition. Electron-microscope photographs of the tested samples show that the relatively straight glide lines, on the boundary of which the extrusion and intrusion takes place, are located at distances equal to $(2{-}6) \times 10^3$ crystal--lattice periods. The causes of occurrence of zones with increased displacement mobility at these intervals are not yet clear. It is deduced, however, from the existence of such an effect that during the time of the experiment the imperfections in the crystal become redistributed and move to individual glide planes. The kinetics of this effect is discussed in some detail. This report was presented by A. A. Bochvar. Orig. art. has: 4 figures

ASSOCIATION: Institut mashinovedeniya (Institute of the Science of Machines)

SUBMITTED: 19Nov64   ENCL: 00   SUB CODE: SS, MM

NR REF SOV: 007   OTHER: 003

Card 2/2

LOZINSKIY, M.G.; ROMANOV, A.N.

Stroboscope for illumination during study of the fatigue kinetics in metals
Zav. lab. 31 no.2:244-246 '65.   (MIRA 18:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya.

LOZINSKIY, M.G.; ROMANOV, A.N.

Mechanism of the extrusive and intrusive displacement of α-iron micro-volumes in fatigue tests at high temperatures. Dokl. AN SSSR 162 no.6:
1277-1280 Je '65.   (MIRA 18:7)

1. Institut mashinovedeniya, Moskva. Submitted November 19, 1964.

LOZINSKIY, M. G.; ROMANOV, A. N. (Moscow)

"Some features of the fracture mechanism of commercial iron during fatigue tests within wide ranges of temperature."

report submitted for 2nd Conf, Dimensioning and Strength Calculations, Budapest, 5-10 Oct 1965.

L 57067-65   EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/
EWP(l)/EWA(h)/EWA(c)   Pf-4/Peb   EM/JD
ACCESSION NR: AP5014209   UR/0122/65/000/005/0056/0063
                                                 620.178.3

AUTHORS: Lozinskiy, M. G. (Doctor of technical sciences); Romanov, A. N. (Engineer)

TITLE: State of the art of the study of fatigue failure in metals and alloys

SOURCE: Vestnik mashinostroyeniya, no. 5, 1965, 56-63

TOPIC TAGS: fatigue, metal fatigue, fatigue failure, slip line, slip band, fatigue life / IMASh 10 apparatus

ABSTRACT: The article presents a review of the state of the art of fatigue failure investigations. An elaborate chart of the different methods for studying the microstructure and the mechanical and physical properties of materials is presented (including methods used for high temperature fatigue). These methods are grouped under the broad classifications: a) light and electron microscopic and x-ray structural methods (for microstructure studies); b) measurements of elasticity and hardness (mechanical properties); c) electrical, acoustical, magnetic, and ultrasonic characteristics (physical properites). It has been established by V. S. Ivanova (Ustalostnoye razrusheniye metallov. Metallurgizdat, 1963)

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L 57067-65

ACCESSION NR: AP5014209   4

that fatigue cracks begin to appear after only 1-10% of the total fatigue life.
The various microstructure methods used to study the formation and growth of these
cracks have yielded the following general characteristics (see also Ya. B. Frid-
man, T. A. Gordeyeva, and A. M. Zaytsev. Stroyeniye i analiz izlomov. Mashgiz,
1960). Cyclic loading causes plastic shear within the grains, resulting in slip
lines which grow in number and length (sometimes fragmenting the grains), form
slip bands, and finally form microcracks which grow. If loaded below the endur-
ance limit, the bands do not cross grain boundaries, and the cracks do not grow.
The elastic property and microhardness effects in fatigue are treated respectively
by I. A. Oding (Dopuskayemye napryazheniya v mashinostroyenii i tsiklicheskaya
prochnost' metallov. Mashgiz, 1962) and T. Jakobory (Damage as an Initial Stage
of Fatigue Fracture. Journ. Phys. Soc. Japan, v. 8, No. 6, 1953). These indicate
that the microhardness increases with cycles until the slip bands are formed and
then decreases while the elastic properties exhibit a hysteresis loop due to in-
ternal friction losses. Changes in electrical properties, magnetic properties
(see N. S. Akulov and V.A. Franyuk. Ob izmenenii nekotorykh fizicheskikh svoystv
metallov v protsesse ustalosti. Doklady AN BSSR, t. III, No. 3, 1959) and acoustic
emission (see N. N. Redsterake, Metals "Sound Off" on Fatigue. "Iron Age", 192,
No. 12, 1963) have also been used to study fatigue behavior. Ultrasonic tech-
niques (see W. I. Bratina and D. Mills. Study of Fatigue in Metals using

Card 2/3

L 57067-65

ACCESSION NR: AP5014209

Ultrasonic Technique. Metal Treatment and Drop Forging, v. 30, No. 213, 1963)
have become useful in determining the amount of fatigue damage. The authors
briefly describe an apparatus (IMASh-10) developed by them which permits observa-
tion and photographing of the sample microstructure during fatigue testing by
having a stroboscopic flash synchronized with the specimen motion. Orig. art. has
4 figures.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00   SUB CODE: MM

NO REF SOV: 013   OTHER: 007

Card 3/3

L 53806-65   EWT(i)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/
EWP(1)/EWA(c)   :...   IJP(c)   JD/EM
ACCESSION NR: AP5014452   UR/0380/65/000/003/0056/0065
                                                   620.172.25+62-75

AUTHORS: Lozinskiy, M. G. (Moscow); Romanov, A. N. (Moscow)

TITLE: Basic types of microstructure deformations developing on the surface of
industrial iron specimens during fatigue tests at a high temperature in a vacuum

SOURCE: Mashinovedeniye, no. 3, 1965, 56-65

TOPIC TAGS: fatigue strength, iron, microstructure

ABSTRACT: Testing equipment used in the iron microstructure experiments is
described. The range of temperature was 20-1200C. The specimens tested were
90 mm long with a cross section 10 x 1 mm, and the load was symmetrical at 3000
cycles per minute. Studies were carried out after approximately 10 million
cycles. Two series of investigations were conducted. In the first the disloca-
tions within the grains were observed, and in the second the border zone of the
grains was studied. Figure 1 on the Enclosure shows typical conditions found in
the first series; Fig. 2 represents group two. The specimens were studied in
three temperature intervals: 20 to 400C, 500C up to and over 800C, and 400 to
500C. Deformations (their origin and propagation) are described in full.

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ACCESSION NR: AP5014452

Twelve high quality microscope photographs illustrate the experiments of both
series. A special type of dislocation is shown, where "subgrains" smaller than
one micron are formed within the grains. Another type of dislocation is found
to be caused by recrystallization of the border zone, resulting in a change of the
size of grains. Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 14Jan65   ENCL: 02   SUB CODE: MM, SS

NO REF SOV: 006   OTHER: 001

Card 2/4

ROMANOV, A.N.; KHAKHINA, L.P.

Manufacture of potato chips. Kons.i ov. prom. 15 no.6:8-10 Je '60.
(MIRA 13:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Potato chips)

ROMANOV, A.N., kand.tekhn.nauk; IVANOVA, G.A., starshiy nauchnyy
sotrudnik; PETKEVICH, V.P., starshiy nauchnyy sotrudnik;
CHINENOVA, E.G., starshiy nauchnyy sotrudnik; MINKVITS, M.L.,
mladshiy nauchnyy sotrudnik

Improved procossing of peas and cereals in manufacturing food
concentrates. Trudy VNIIKOP no.10:16-29 '59.   (MIRA 14:8)
   (Food, Concentrated) (Peas) (Cereals as food)

ROMANOV, A.N., kand.tekhn.nauk; RYBIN, N.S., starshiy nauchnyy sotrudnik;
IVANOVA, G.A., starshiy nauchnyy sotrudnik; PETKEVICH, V.P.,
starshiy nauchnyy sotrudnik

Standard processing procedure for manufacturing food concentrates.
Trudy VNIIKOP no.10:42-48 '59.   (MIRA 14:8)
                        (Food, Concentrated)

TKACHEV, Nikolay Ivanovich; GUL', V.Ye., doktor khim. nauk, prof.,
retsenzent; ROMANOV, A.N., kand. tekhn.nauk, retsenzent;
KUZ'MINSKIY, R.V., inzh., retsenzent; D'YAKONOVA, V.P.,
inzh.-khim., spets.red.; MOROZOVA, I.I., red.; KISINA,
Ye.I., tekhn. red.

[Plastics and their use in the bakery and yeast industry]
Plasticheskie massy i ikh primenenie v khlebopekarnoi i
drozhzhevoi promyshlennosti. Moskva, Pishchepromizdat,
1963. 222 p.   (MIRA 17:1)

ZOTOV, V.P.; SILUYANOV, V.G.; GUGINA, Ye.F.; AUERMAN, L.Ya.; ALEKHINA, M.S.;
        BEZZUBOV, A.D.; BODROV, V.A.; BUDNYY, A.V.; BURTSEV, Ye.L.;
        VAYNSHTEYN, V.O.; GAVRILOV, A.N.; GORBATOV, V.M.; GRITSENKO, N.N.;
        DOLGUSHEVA, L.I.; YEDYGENOV, K.Ye.; ZHURAVLEVA. S.S.; ZACHESKIN,
        Ya.A.; IVKIN, A.P.; IZOTOV, A.K.; IL'INSKIY, N.A.; IRINARKHOVA,
        A.M.; KARPENKO, A.K.; LYSOGOR, P.M.; LUPISH, A.T.; OLEYNIKOV, V.V.;
        ORANZHEREYEVA, V.F.; PETROV, N.A.; PYATIBRATOV, M.A.; ROMANOV,
        A.N.; RAUBE, P.V.; RYZHENKO, L.P.; SEMYKIN, A.A.; SHEFER, A.P.

        G.IA.Ivanov; obituary. NTO 4 no.10:39 O '62.   (MIRA 15:9)
                (Ivanov, Georgii IAkovlevich, 1897-1962)

ROMANOV, A.N.

Some features of the ecology of capercaillies as related to the
clearing of forests in the northern taiga. Trudy Komi fil. AN SSSR
no.9:61-73 '60.   (MIRA 15:1)
          (CHIKSHINA VALLEY_GROUSE)   (FOREST FAUNA)

ROMANOV, A.N., dotsent, kandidat tekhnicheskikh nauk.

[Storage of bread] Khranenie khleba. Moskva, Pishchepromizdat, 1953.
107 p.   (MLRA 6:9)
                                        (Bread--Storage)

BABENKO, A.S., inzhener; ROMANOV, A.N., inzhener.

Using large panel blocks. Elek.sta. 24 no.7:46-47 Jl '53.   (MLHA 6:7)
(Buildings, Prefabricated)

ROMANOV, A. P.

"On the Determination of the Distance Traveled by Transfer Trains in Railroad Centers." Cand Tech Sci, Leningrad Order of Lenin Inst of Railroad Transport Engineers imeni Academician V. N. Obraztsov, Min Railroads USSR, Leningrad, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

ROMANOV, A.P., kand.tekhn.nauk, assistent

Establishing the scope of movement of transfer trains at the
Leningrad railroad terminal. Sbor. LIIZHT no.153:43-63   '58.
(MIRA 11:8)

(Leningrad--Railroads--Yards)

ZUBKOV, I.I., kand. tekhn. nauk; ROMANOV, A.P., kand. tekhn. nauk;
TETEREV, M.N., kand. tekhn. nauk; UGRYUMOV, A.N., kand. tekhn. nauk;
KUZ'MIN, N.N., inzh. (g. Leningrad)

"Aspects of railroad operation. Zhel. dor. transp. 41 no.1:94-96
Ja '59.   (MIRA 12:1)

                    (Railroads)

ACC NR: AP^0035303   Monograph   UR/

Romanov, A. P.

Space center, astronauts, and outer space (Kosmodrom, kosmonavty, kosmos) Moscow, Izd-vo DOSAAF, 1966. 225 p. photos. 30,000 copies printed.

TOPIC TAGS: space program, manned spacecraft, cosmonaut

PURPOSE AND COVERAGE: This book, intended for the general reader, describes the Soviet manned space missions through the years, presenting the material in the form of a diary. The author's notes pertain to all phases of manned space missions including interviews with cosmonauts, designers, and their activities during preparations for flight, at the cosmodrome, and after flight. The author dedicates this book to scientists, designers, cosmonauts, and to the DOSAAF.

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ACC NR: AM6035303

Notebook 3. April-May 1962 (Interview with Gagarin and Titov) -- 39
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   after flight) -- 141
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   and Nikolayev) -- 149
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   Keldysh) -- 157
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   Nikolayev and Gagarin) -- 165
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SUB CODE: 22/   SUBM DATE: 19Feb66/

Card 2/2

ROMANOV, A.P., gvardii polkovnik zapasa, byvshiy komandir eskadril'i
nochnykh razvedchikov; SOKOLOV, V.P., gvardii polkovnik, Geroy
Sovetskogo Soyuza, byvshiy pomoshchnik komandira polka

Aerial scouts. Vest.Vozd.Fl. no.7:77-83 Jl '61.   (MIRA 14:8)
        (World War, 1939-1945--Aerial operations)

ROMANOV, Aleksandr Petrovich; VODOLAGIN, V., red.; TROYANOVSKAYA, N., tekhn. red.

[The course of events...; from the diary of a Tass special reporter] Kak eto bylo...; iz dnevnika spetsial'nogo korrespondenta TASS. Moskva, Gos.izd-vo polit.lit-ry, 1961. 53 p.
(MIRA 15:1)

1. Spetsial'nyy korrespondent TASS (for Romanov).
(Astronautics)

ROMANOV, A.P.

Effect of cutting on the young growth of p   in the southern
part of the Kokchetav-Munchaktinskiy pene   .. izv. AN Kazakh.
SSR. Ser. biol. nauk 3 no.1:38-43 Ja-F ' .

(MIRA 18:5)

ROMANOV, A.P., kand.tekhn.nauk

    Problems in improving the outgoing local freight traffic. Sbor.-
trud.LIIZHT no.189:22-38 '62.
                (Railroads--Traffic)

(MIRA 16:7)

ROMANOV, A.P., kand.tekhn.nauk

Organization of car flows between base classification stations.
Sbor.trud.LIIZHT no.189:75-94 '62. (MIRA 16:7)
(Railroads—Traffic)

ROMANOV, A.P. (g.Shchuchinsk, TSelinnyy kray)

Unprecedented windfall. Priroda 51 no.3:74-75 Mr '62.
(MIRA 15:3)

(TSelinograd Province--Forests and forestry)
(TSelinograd Province--Storms)

ROMANOV, Aleksandr Petrovich, inzh.; POLOZOV, P.S., red.; YEGOR'KOV, N.F.,
izd.red.; BELOGUROVA, I.A., tekhn.red.

[Organizing the maintenance of die-stamping equipment in sheet-metal
working plants] Organizatsiia shtampovogo khoziaistva v tsekhakh
kholodnoi shtampovki; stenogramma lektsii, prochitannoi v LDMTP na
zaniatii seminara po kholodnoi shtampovke. Leningrad, 1960. 31 p.
(MIRA 14:6)

(Dies (Metalworking))

ROGANOV, A.P., kand. tekhn.

    Selecting the weigh   on trains of electrified
    double-track lines wi   enger traffic. Stor. trud.
    LIIZHT no.219:9-54   (MIRA 18:9)

L 01149-66   EwT(m)/EPF(c)/EWP(j)   RM

ACCESSION NR: AP5022000/   UR/0286/65/000/014/0078/0078
                                                     678.043.044

AUTHOR: Boguslavskiy, D. B.; Borodushkina, Kh. N.; Malinovskiy, M. S.;
Kolenskaya, A. I.; Kupriyanova, O. N.; Romanov, A. S.; Sapronov, V. A.; Trokay,
S. P.; Chavchich, T. A.; Yurilina, L. N.; Kovaleva, V. F.

TITLE: A method for vulcanizing rubber. Class 39, No. 172984

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 78

TOPIC TAGS: vulcanization, rubber, polymer, polyester plastic

ABSTRACT: This Author's Certificate introduces a method for vulcanizing rubber by
using alkylphenolformaldehyde resins in the presence of chloride-containing poly-
mer accelerators. A wider selection of accelerators is provided by using polyester
resins--products of condensation of glycerine a-monohydrochloride with phthalic
and/or maleic anhydride.
ASSOCIATION: none
SUBMITTED: 10Nov63   ENCL: 00   SUB CODE: MT
NO REF SOV: 000   OTHER: 000

Card 1/1

SOV/137-59-1-490

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 62 (USSR)

AUTHOR: Romanov, A. S.

TITLE: The Employment of Ammonia in the Cyanidation of Copper Ores
(Primeneniye ammiaka pri tsianirovanii medistykh rud)

PERIODICAL: Tr. Sev.-Kavkazsk. gorno-metallurg. in-ta, 1957, Nr 15, pp 289-
306

ABSTRACT: In the process of extraction of Au and Ag from ores by the method of
cyanidation (C) the amount of cyanide consumed is considerably in-
creased if Cu is also contained in the ores. A method of ammonia C
was tested in order to determine more precisely the chemical proc-
esses involved and to develop conditions ensuring economical proc-
essing of Cu ores by this method. The effect of NH_3 on the dissolu-
tion (D) of pure Au and Cu minerals was investigated, ammonia-
cyanide complexes (ACC) of Cu were obtained, and certain of their
properties were studied; experiments dealing with the C of Cu ores
were carried out both with and without the employment of NH_4Cl.
The following conclusions were reached: 1) The widespread opinion
regarding the high activity of ammonia-cyanide solutions is

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SOV/137-59-1-490

The Employment of Ammonia in the Cyanidation of Copper Ores

erroneous because NH_3 and its salts do not affect the rate of D of the Au and its alloys in cyanide. 2) NH_3 considerably hampers the D of Cu minerals in cyanide owing to the formation of insoluble ACC's

$$[Cu(NH_3)_4][Cu_2(CN_3)]_2 \text{ and } [Cu(NH_3)_2][Cu(CN)_2].$$
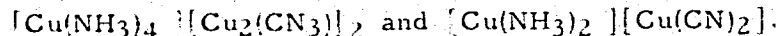
The mechanism of the formation of the ACC's is shown. 3) Under certain conditions ammonia C may ensure a high degree of extraction of Au from a solution containing small quantities of Cu (less than 0.013-0.014%); this is attributable to the formation of ACC's during the process of C, as well as to their precipitation from the solution. The D of Au occurs as a result of the liberation of cyanide during the formation of the ACC's of Cu. 4) In the course of the process itself, NH_3 is formed when a salt of NH_4 is added to the cyanide solution. Compared with NaOH, lime gives better results as an alkali agent. 5) The ammonia C process has been employed with ores containing oxidized Cu minerals which are soluble in NH_3. Optimal results with regard to extraction of Au and the content of Cu in the solution are attained when the ratio $KCN_{total} / Cu_{solution}$ -1.5. 6) The consumption of cyanide constitutes 1.6 mole per 1 atom of Cu as compared with 3.5 moles in the case of the standard C method. The consumption of the NH_4Cl constitutes one part to one part (by weight) of Cu contained in the ore, i.e., it
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SOV/137-59-1-490

The Employment of Ammonia in the Cyanidation of Copper Ores

exceeds the theoretical consumption by a factor of 1.5.   7) In order to prevent the contamination of air with the toxic NH_4CN, NH_4Cl should be introduced into the solution only after the cyanide has been used up completely.   The introduction of the NH_4Cl into the solution in several batches represents the most rational method.

N. P.

Card 3/3

SOV/149-58-4-15/26

AUTHORS: Ageyenkov, V.G.,
              Romanov, A.S.,
              Svistunov, N.V.

TITLE: Matte Smelting as a Method of Recovering Gold from
              Rich Sulphide Concentrates (Plavka na shteyn kak sposob
              izvlecheniya zolota iz bogatykh sul'fidnykh kontsentratov)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya
              Metallurgiya, 1958, Nr 4, pp 109-118 (USSR)

ABSTRACT: As a result of the growing practise of enriching the
              gold-bearing ores, substantial quantities of rich
              sulphide concentrates, often containing a large (10-18%)
              proportion of copper, are produced by various mining
              concerns of East Siberia. Since recovery of gold from
              this type of material by the conventional methods
              (i.e. amalgamation or cyaniding) is difficult, these
              concentrates are sent to various copper-smelting works
              in the Urals, where gold is recovered by copper matte
              smelting. Although no objections can be raised to
              this process on technical grounds, the practise as
              such is very wasteful and uneconomical owing to:
Card 1/7   (i) Very high costs of transport; (ii) considerable

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Matte Smelting as a Method of Recovering Gold from Rich
        Sulphide Concentrates

losses of the concentrates in transit (while loading
and unloading) and (iii) increased proportion of gold
lost in the waste slags produced in large quantities
when the gold-bearing concentrates are smelted with a
much larger proportion of copper bearing material.
It has been suggested that this problem could be
solved more economically by building (e.g. in the
Chitin region) a special, small smelting works for
processing the Siberian concentrates with the
siliceous gold-bearing ores from the Taseyevo deposits
(at present also smelted in the Ural works) used as a
flux. However, before realisation of such a project
could be considered, a number of technical problems
had to be solved and the object of laboratory
experiments described in the present article was to
evaluate (in terms of the maximum attainable recovery
of gold) the practicability of matte smelting process
Card 2/7   for treating the Siberian concentrates, determine the

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Matte Smelting as a Method of Recovering Gold from
Rich Sulphide Concentrates

optimum operating conditions, etc.. The composition of
three different concentrates - with the gold content
ranging between 48.3 and 246.5 g/ton - and the flux
(Taseyev quartz ore containing 194.4 g/ton gold) used in
the experiments is given in Table 1. The charge was
calculated to give a low melting point, low density
slag containing 48% SiO_2, 20% FeO and 22% CaO. Lime was
used as the basic flux and, since no converter slag was
available, a quantity of Fe_2O_3 was added to the charge.
The results obtained under various operating conditions
were assessed on the basis of the gold and silver
content in the slag. In the first series of
experiments, the effect of variation of the matte
yield on the recovery of gold, silver and copper was
studied (Table 2, Fig.1). The yield of matte was
controlled by varying the proportion of lime in the
charge: With the lime content increasing from 0 to 10%,
the matte yield increased from 13-19% of the charge

Card 3/7   and the recovery of all three metals increased (in the

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Matte Smelting as a Method of Recovering Gold from Rich
   Sulphide Concentrates

   case of gold from 85 to 97.9%). However, under these
   conditions variation of the matte yield was accompanied
   by variation of the composition of the slag which in
   turn affected the degree of gold recovery. Consequently,
   in the next series of tests in which various quantities
   of matte of known composition were added to the charge,
   the composition of the slag was maintained practically
   constant while the matte yield varied between 14 and
   25%. Under these conditions recovery of gold increased
   from 97.1 to 99% and its content in the slag decreased
   from 3.8 to 1.6 g/ton (Table 3, Fig.2). Fig.3 shows
   how recovery of gold and copper varied when both the
   yield and composition of matte were varied: In this
   case the relationship between recovery of gold and the
   matte yield was quite different. When the yield
   decreased (i.e. when the copper content of the matte
   increased from 14 to 55%) recovery of gold increased
Card 4/7 from 97.1 to 99.06%. (This effect was attributed to

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Matte Smelting as a Method of Recovering Gold from Rich
        Sulphide Concentrates

the fact that the richer the matte, the larger
proportion of metallic copper it contains. Since
gold is easily soluble in copper and since it is
believed that no gold is present in the sulphide phase,
enrichment of the matte results in higher recovery
figures.) In the last series of experiments the effect
of the sulphur content in the slag on the magnitude of
gold losses was examined (Fig.4). When the amount of
sulphur present in the slag increased from 0.2 to 1.0%,
the losses of gold increased from 2 to 12 g/ton of slag.
These results indicated that practically all gold lost
in the slag was contained in the matte inclusions, the
presence of which - in the form of large globules or
emulsified particles - was confirmed by microscopic
examination (Fig.5 and 6). The highest concentration
of the matte inclusions was observed near the matte-
slag interface and near the slag surface. Matte
inclusions in the lower portion of the slag layer were
attributed to insufficiently long duration of the

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Matte Smelting as a Method of Recovering Gold from Rich
        Sulphide Concentrates

smelting operation, those near the top had been carried
there by gas bubbles (Fig.6). The results obtained
by the present Authors show conclusively that the
Siberian concentrates could be effectively treated by
matte smelting followed by conversion to yield crude
gold-bearing copper. (The flow sheet of the proposed
process is shown on Fig.7.) Since high values of gold
recovery (99%) can be attained within wide variations
of the matte yield and composition and since the gold
losses are determined mainly by the nature of slag and
the duration of the holding period, smelting to low
melting point slag is recommended. Under such
conditions gold losses could be limited to 1 g/ton of

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SOV/149-58-4-15/26

Matte Smelting as a Method of Recovering Gold from Rich
      Sulphide Concentrates

            slag and 0.9-1.0 ton of the Taseyevo ore could be
            treated with each ton of the Siberian concentrates.
            There are 7 figures, 3 tables and 2 Soviet references.

ASSOCIATION: Severokavkazskiy Gornometallurgicheskiy Institut.
            Kafedra Metallurgii Blagorodnykh i Redkikh Metallov
            (North Caucasian Mining-Metallurgical Institute,
            Chair for Metallurgy of Noble and Rare Metals)

SUBMITTED: 21st April 1958.

Card 7/7

ROMANOV, A. S., Candidate of Tech Sci (diss) -- "Copper in the cyanide process".

Moscow, 1959. 12 pp (Min Higher Educ, Moscow Inst of Nonferrous Metals and Gold

im M. I. Kalinin), 170 copies (KL, No 21, 1959, 116)

ROMANOV, A.S.

Some problems of cyanidation of cuprous gold ores. Izv.vys.
ucheb.zav.; tsvet.met. 2 no.4:106-101 '59.   (MIRA 13:1)

1. Severokavkasskiy gornometallurgicheskiy institut. Kafedra
metallurgii blagorodnykh i redkikh metallov.
          (Cyanide process)

L 36203-65   EWT(1)/EWG(v)/EPR/.-2/EPA(bb)-2   Pe-5/Ps-4   WW
ACCESSION NR: AP5010128   UR/0286/64/000/013/0007/0007

AUTHOR: Nikolayev, N. S.; Vzorov, M. I.; Perepletchikov, L. Ya.; Romanov, A. S.

TITLE: Exhaust (relief) valve. Class 4, No. 163551

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1964, 7

TOPIC TAGS: aircraft cabin equipment, valve

Translation: An exhaust (relief) valve for the pressurized cabin of an air-
craft. The distinguishing feature is more dependable depressurization of
a cabin. It has a force-open device in the form of a "limp" membrane which
is fastened to a joint of the valve, to the rigid center of which a tube is
attached. The tube enters into the hollow of the valve body. Compressed
air is supplied to the tube through a pipe which contains a shuttle valve.
Orig. art. has: 1 figure.

Card 1/2

L 36203-65
ACCESSION NR: AP5010128
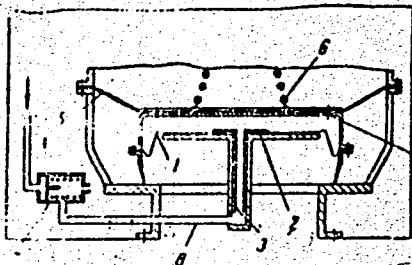
Keys: 1 - "limp" membrane; 2 - rigid
center of the "limp" membrane;
3 - tube; 4 - valve joint; 5 -
valve membrane; 6 - conical spring;
7 - shuttle valve; 8 - pipe

ASSOCIATION: Organizatsiya goskomiteta po aviatsionnoy tekhnike SSSR (Organization
of the State Committee for Aviation Technology, SSSR)

SUBMITTED: 10Jun63   ENCL: 00   SUB CODE: AC, IE

NO REF SOV: 000   OTHER: 000   JPRS

Card 2/2

L 34862-65   EWT(J)/EWT(1)/EWT(m)/EWP(f)/EWG(v)/EPR/T-2/EPA(bb)-2/EWA(c)   Pe-5/Ps-4
ACCESSION NR: AP5007486   JD/WW   S/0286/65/000/004/0096/0096

AUTHORS: Nikolayev, N. S.; Vzorov, M. I.; Romanov, A. S.; Perepletchikov, L. Ya.

TITLE: A slave valve with positive pneumatic closing. Class 47, No. 168565

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 96

TOPIC TAGS: pneumatic device, valve

ABSTRACT: This Author Certificate presents a slave valve assembly with positive
pneumatic closing. The assembly includes a casing with a cover and a nozzle, the
basic valve fastened to a spring-loaded membrane, and a "repeater" (see Fig. 1 on
the Enclosure). The device is provided with a pneumatic unit which contains a
shuttle valve with a spring, two check valves, a spring-loaded membrane with a
rigid center to which a needle valve is attached, and a two-way stopcock. The
nozzle of the casing is provided with a check valve mounted on the side of the
housing of the basic valve. Orig. art. has: 1 figure.

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta po aviatsionnoy tekhnike
SSSR (Organization of the State Committee for Aviation Technology, SSSR)

SUBMITTED: 10Jan64   ENCL: 01   SUB CODE: IE
NO REF SOV: 000   OTHER: 000
Card 1/2

L 63571-65   EWG(v)/EWP(k)/EWT(d)/EWT(1)/EWP(k)/T-2/EWA(d)/EWP(1)/EWP(v)   Pe-5/

ACCESSION NR: AP5015544 Pf-4

UR/0286/65/000/008/0082/0083
621.646
629.13.01/.06

AUTHOR: Barinov, V. S.; Voronin, G. I.; Vzorov, M. I. Perepletchikov, L. Ya.; Romanov, A. S.

TITLE: Safety valve for hermetically sealed aircraft cockpits. Class 47, No. 170256

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 82-83

TOPIC TAGS: pressure valve, safety valve, cockpit pressurization rate control, pressurized cockpit, aircraft cockpit, pressure rate transducer

ABSTRACT: An Author Certificate has been issued for a safety valve for a hermetically sealed aircraft cockpit. The valve consists of a casing, a cover having a spray nozzle, a basic valve mounted on the rigid center of a spring-loaded diaphragm, and an excess-pressure unit. To limit the pressure-increase rate in the cockpit, the safety valve is equipped with a pressure-increase-rate transducer whose interior is divided into two cavities by a spring-loaded diaphragm with a push rod mounted on it. One of the cavities connects to the cockpit through a calibrated hole, while

Card 1/3

L 63571-65

ACCESSION NR: AP5015544   /

the other cavity, containing a contact pair, connects to the cockpit through a
regulated needle valve, Closure of the contact pair is performed by the push rod
when pressure on the transducer's spring-loaded diaphragm decreases to a certain
point. (See Fig. 1 of Enclosure.) Orig. art. has: 1 figure.   [LB]

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta po aviatsionnoy tekhnike SSSR
(Organization of the State Committee on Aviation Technology SSSR)

SUBMITTED: 20Aug64   ENCL: 01   SUB CODE: AC, IE

NO REF SOV: 000   OTHER: 000   ATD PRESS: 4020
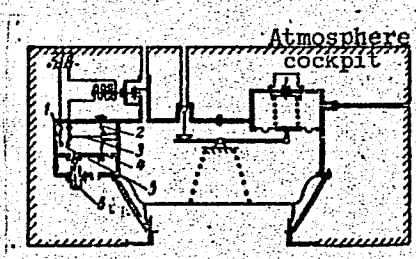
Card 2/3

L 63571-65

ACCESSION NR: AP5015544   ENCLOSURE: 01

Fig. 1. Safety Valve

1 - Pressure-increase-rate transducer;
2 - spring-loaded diaphragm;
3 - push rod; 4 - calibrated hole;
5 - contact pair; 6 - regulated needle
valve.

Card 3/3

ACC NR: AP7005674   SOURCE CODE: UR/0413/67/000/002/0144/0144

INVENTOR: Yefimov, K. P.; Romanov, A. S.; Terenin, A. P.; Chizhikov, Yu. V.

ORG: none

TITLE: Device for synchronizing the operation of the exhaust valves of a pressure regulating system for pressurized cabins. Class 47, 190747

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 144

TOPIC TAGS: pressure regulator , aircraft cabin equipment, valve, cabin pressurization, spacecraft carried equipment

ABSTRACT: The proposed synchronizing device consists of a housing whose cavity contains spring-loaded elastic membranes with by-pass valves fastened to them. These valves shut off the main ducts connecting the exhaust valve
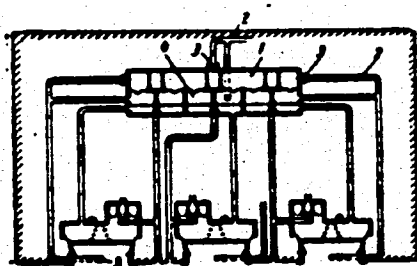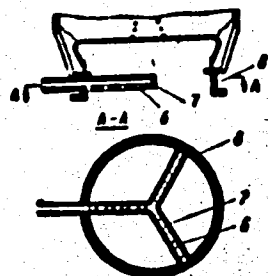
UDC: 621.646
      629.13.01/06

Card 1/3

ACC NR: AP7005674

Fig. 1. Synchronization device

1 - Cavity above membrane;
2 - feed lines; 3 - check valves;
4 - chambers under membrane;
5 - transducer; 6 - openings;
7 - stiffeners; 8 - housing.

Card 2/3

ACC NR: AP7005674

cavities under the membrane to a vent to the atmosphere. To ensure
synchronous operation of three or more exhaust valves, the cavity above
the membrane in the device is connected by feedlines containing check
valves to the corresponding chambers under the membrane and to air flow-
rate transducers (see Fig. 1). Orig. art. has: 1 figure.   (TN)

SUB CODE: 01/3,4/SUBM DATE: 29 Dec 65/ ATD PRESS: 5117

Card 3/3

ACC NR: AP6025664

SOURCE CODE: UR/0413/66/000/013/0131/0131

INVENTOR: Vzorov, M. I.; Romanov, A. S.

ORG: None

TITLE: An actuating valve. Class 47, No. 183552

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 131

TOPIC TAGS: automatic pressure control, valve

ABSTRACT: This Author's Certificate introduces an actuating valve based on Author's Certificate No. 168096. Cabins do not have to be pressurized when control equipment or the "follower" unit go out of adjustment. The actuating valve has a unit which cuts in an evacuated bellows connected to the regulating spring by a lever set on a hinge. A spring loaded valve is mounted on this lever. This valve covers the channel passage which connects the primary valve cavity with the atmosphere when cabin pressure drops below the permissible minimum.

UDC: 621.646 629.13.01/06

Card   1/2
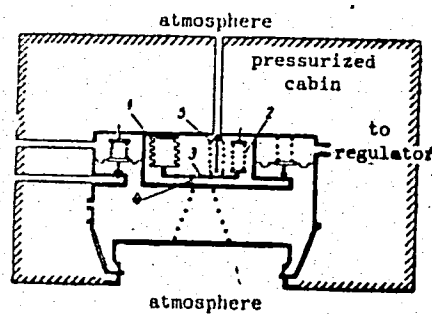
ACC NR: AP6025664

1—bellows; 2—spring;
3—lever; 4—hinge;
5—valve

SUB CODE: 13,01/ SUBM DATE: 19Jul65

Card 2/2

ACC NR: AP6029950   SOURCE CODE: UR/0413/66/000/015/0127/0128

INVENTOR: Vzorov, M. I.; Romanov, A. S.; Yefimov, K. P.; Terenin, A. P.

ORG: none

TITLE: Actuating valve. Class 47, No. 184575

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 127-128

TOPIC TAGS: valve, actuating valve, aircraft cabin environment, aircraft cabin equipment, pressure regulator, hermetic seal

ABSTRACT: An attempt has been made to simplify the design and increase the reliability of an actuating valve for hermetic aircraft cabin previously described in Author Certificate No. 170256. In the improved valve, the pressure increment chamber of the air speed transmitter has a rigid center in the spring-loaded separating membrane which is connected with the rigid center of a 'limp' membrane;

UDC: 621.646
629.13.01/06

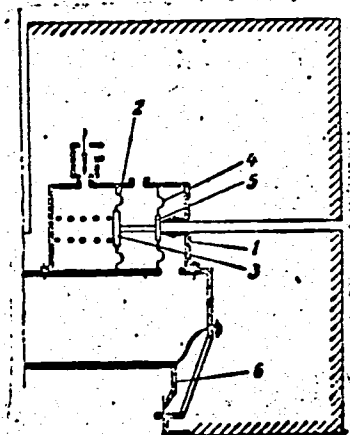Card 1/2

ACC NR: AP6029950

Fig. 1. Actuating valve

1 - Air speed transmitter; 2 - spring-loaded membrane; 3 - rigid center of the spring-loaded membrane; 4 - 'limp' membrane; 5 - rigid center of the 'limp' membrane; 6 - main valve.

this junction forms a venting valve connecting the cavity of the main valve with the atmosphere (see Fig. 1). Orig. art. has: 1 figure.

SUB CODE: 21/ SUBM DATE: 22Dec64

Card   2/2

ROMANOV, A.V.

Device for the automatic cutter of twist drills. Stan. i instr. 24 no.
6:31-32 Je '53.   (MLRA 6:7)
                                                          (Spiral milling)

ROMANOV, A.V.

Lapping thread with a right-angled profile. Stan.i instr. vol. 24 no.9:34
S '53.   (MLRA 6:10)
                                            (Grinding and polishing)

ISTOMINA, V.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscov, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Istomina, V.S. Hedriga, V.P. Romanov, A.V. Romanova, Ye. Ya.	"Problems of Calculations of Filtration of Hydraulic Engineering Installations"	Ministry of Construction

SO: W-30604, 7 July 1954

Romanov, A.V.

USSR/Engineering - Machine tools

Card 1/1   Pub. 103 - 22/29

Authors   : Romanov, A. V.

Title   : A precision blanking-die of a new design

Periodical : Stan. i instr. 10, page 35, Oct 1954

Abstract   : The operation and structure of a gang blanking-die, designed by T. Rusakov, is described. Drawing.

Institution : ...

Submitted   : ...

ROMANOV, A. V.

"Filtration in the Foundation of Dams With Drainage Facilities." Cand Tech Sci, All-Union Sci-Res Inst of Water Supply, Sewerage, Hydraulic Engineering Structures, and Engineering Hydrogeology, 8 Jan 55. (VM, 29 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

Romanov, A.V.

USSR/ Engineering

Card 1/1   Pub. 103 - 11/22

Authors   : Romanov, A. V.

Title : A device for grinding polyhedral components

Periodical : Stan. i instr. 6, 30-31, June 1955

Abstract : An indexing head for rotating the work through any required angle, (horizontal displacement of from 0 - 90°, and vertical displacement of from 0-360°) so that faces can be machined on polyhedral components in definite angular relationship, is described. Drawing.

Institution : .....

Submitted : .....

ROMANOV, A.V.; SHAFRANOVSKAYA, I.N.

Lightweight chafer. Tekst.prom. 19 no.1:95 Ja '59.
(MIRA 12:1)
(Textile fabrics)

ROMANOV, A.V.

Technical fabrics manufactured with combined yarns. Tekst.prom.
25 no.11:10-13 N '65.   (MIRA 18:12)

1. Zamestitel' nachal'nika otdela Yaroslavskogo proyektno-
tekhnologicheskogo i nauchno-issledovatel'skogo instituta.

MARKEVICH, N.V.; ROMANOV, A.V.

Preliminary results of observing rock pressure on supports made of
monolithic reinforced concrete in the shield system of mining with
filling. Vop. gor. davl. no.7:19-26 '61.   (MIRA 18:7)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR.

ROMANOVA, A.V.; KUCHAK, G.M.

X-ray investigation of a liquid indium-tin alloy with an eutectic
composition. Sbor.nauch.trud. Inst. metallofiz. AN URSR no.19:95-
101 '64.   (MIRA 18:5)

ROMANOV, A.V.; ALEKSANDRI, V.F.

Filtration calculations of waste disposal reservoirs. Vop. fil'tr.
rasch. gidr. soor. no.4:53-77 '64.   (MIRA 17:6)

ROMANOV, A.V.; ALEKSANDRI, V.F.; KUZ'MENKO, I.D.

Calculation of spatial flow toward drains under complex hydrogeological conditions. Vop. fil'tr. rasch. gidr. soor. no.4:91-107 '64.
(MIRA 17:6)

ROMANOV, A.V.

Water flow toward a perfect well. Vop. fil'tr. rasch. gidr. soor.
no.4:25-31 '64.   (MIRA 17:6)